Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

Claims 6-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Pitman (US 2002/0143530) in view of Ellis (US 5,504,518) and Jiang (US 6,901,362).

Claims 6, 8 and 11 have been amended so as to further distinguish the present invention, as recited therein, from the references relied upon in the rejection. As a result, the above-mentioned rejection is submitted to be inapplicable to the claims for the following reasons.

Claim 6 is patentable over the combination of Pitman, Ellis and Jiang, since claim 6 recites a feature quantity extracting apparatus including, in part, a feature quantity calculating section for calculating respective prescribed feature quantities of band spectra, the feature quantity calculating section obtaining the calculated prescribed feature quantities as feature quantities of an audio signal, wherein the feature quantity calculating section calculates peak values of spectra of the audio signal corresponding to values at respective peaks of the band spectra from the band spectra of the audio signal, and obtains, as the prescribed feature quantities, values of difference between peak values of frequency bands, each of the peak values being of a greatest spectrum strength among local maximums of each of the band spectra. The combination of Pitman, Ellis and Jiang fails to disclose or suggest the feature quantity calculating section as now recited in claim 6.

Regarding Pitman, it discloses a system for identifying audio content based on a number of events each of which is associated with a semitone frequency band in which it occurred and a time group within which it occurred. (See pages 3 and 4, paragraphs [0030] – [0039] and Figure 4A). However, as admitted in the rejection, Pitman fails to disclose or suggest the feature quantity calculating section of claim 6. Therefore, Ellis and Jiang relied upon as disclosing this feature of claim 6.

Ellis discloses a segment recognition subsystem 26 that is capable of detecting a number matches on a given key signature for consecutive frames and that the number of matches is referred to as a "peak width". Based on the description, it is apparent that when two different signals are compared, a point at which the two signals match is referred to as a peak and the number of consecutively detected matches is referred to as the peak width. (See column 19, lines 23-31; column 31, lines 22-26; and column 45, lines 25-31).

Based on the above discussion, it is apparent that Ellis detects matches of two different signals. When detecting the matches, the peak width is calculated. Further, the peak width is described in Ellis as the number of such consecutively detected matches. More specifically, the two different signals are compared to detect matches, each match is referred to as a peak, and the number of consecutively detected matches is referred to as the peak width. Therefore, in Ellis, the peak and the peak width are determined on the basis of the two signals and the peak width is also determined depending on the relative relationship between the two different signals.

On the other hand, claim 6 recites that the feature quantity calculating section calculates peak values of spectra of an audio signal corresponding to values at respective peaks of the band spectra from the band spectra of the audio signal, and obtains, as the prescribed feature quantities, values of difference between peak values of frequency bands, each of the peak values being of a greatest spectrum strength among local maximums of each of the band spectra. The peak width of Ellis is completely different from the peak values recited in claim 6.

In order to address this deficiency of Ellis, the rejection now relies on Jiang, which discloses a system for classifying and segmenting audio signals. One of the operations that the system performs is the calculation of band periodicity. Regarding this, the band periodicity for a band is disclosed as being calculated by initially calculating a correlation function for the band using a formula set forth at column 11, lines 1-8. The maximum local peak of the correlation function for each band is then located in a conventional manner. (See column 10, line 62 – column 11, line 13).

In the rejection, the locating the maximum local peak of the correlation function performed by the system of Jiang is relied upon as corresponding to the claimed feature quantity calculation section that calculates the peak values. However, it is clear that this recitation in Jiang relates to the locating of a peak of a correlation function, not peak values of spectra of an audio signal, as is recited in claim 6. Therefore, combining the peak of a correlation function disclosed in Jiang with the peak determined by matching two signals disclosed in Ellis still fails to disclose or suggest the claimed feature of calculating peak values of spectra of the audio signal corresponding to values at respective peaks of the band spectra from the band spectra of the audio signal, and obtaining, as the prescribed feature quantities, values of difference between peak values of frequency bands, each of the peak values being of a greatest spectrum strength

among local maximums of each of the band spectra. As a result, claim 6 is patentable over the combination of Pitman, Ellis and Jiang.

As for claims 8 and 11, they are patentable over the combination of Pitman, Ellis and Jiang for reasons similar to those set forth above in support of claim 6.

Claims 31-42 are rejected under 35 U.S.C. §103(a) as being unpatentable over Pitman in view of Ellis. However, claims 31-42 are submitted to be patentable over these references based at least on their respective dependency from claim 6, 8 or 11.

Because of the above-mentioned distinctions, it is believed clear that claims 6-13 and 31-42 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 6-13 and 31-42. Therefore, it is submitted that claims 6-13 and 31-42 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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